

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-11. (cancelled)

12. (new) A pump characterised by comprising first and second pistons reciprocable rectilinearly in respective first and second cylinders, said first and second pistons being moved relative to their respective cylinders by operation of an A.C. electric motor the rotary output shaft of which is coupled to said first and second pistons by means including a constant velocity cam and cam follower mechanism converting rotary motion of the output shaft into reciprocatory motion of said first and second pistons 180° out of phase with one another.

13. (new) A pump as claimed in claim 12 characterised in that said first and second pistons are axially aligned.

14. (new) A pump as claimed in claim 13 characterised in that said first and second axially aligned pistons cooperate with said constant velocity cam through the intermediary of respective cam followers engaging said constant velocity cam at opposite ends of a diameter of the circle of rotation of said cam.

15. (new) A pump as claimed in claim 12 characterised in that said cam followers are roller cam followers.

16. (new) A pump as claimed in claim 12 characterised in that said first and second cam followers are spring urged into engagement with the cam surface of said constant velocity cam.

17. (new) A pump as claimed in claim 12 characterised in that said first and second cam followers are simultaneously urged to engage the cam surface of said constant velocity cam by compression springs.

18. (new) A pump as claimed in claim 12 characterised in that said first and second cam followers are interconnected by tension spring means simultaneously urging both cam followers to engage the cam surface of said constant velocity cam.

19. (new) A pump as claimed in claim 12 characterised by including third and fourth axially aligned pistons reciprocable in respective third and fourth cylinders, said third and fourth pistons being driven for reciprocatory movement 180° out of phase with one another by a second constant velocity cam driven by said A.C. motor output shaft, the reciprocable movement of said third and fourth pistons being 90° out of phase with the reciprocatory movement of said first and second pistons.

20. (new) A pump as claimed in claim 19 characterised in that liquid discharged from said first, second, third and fourth cylinders is supplied to a common pressure loop.

21. (new) A pump as claimed in claim 12 characterised in that a reduction gearbox is interposed between the output shaft of the motor and said constant velocity cam or cams.

22. (new) A pump as claimed in claim 12 characterised in that a flywheel is incorporated in the drive transmission between the A.C. motor output shaft and the or each constant velocity cam.

23. (new) A pump as claimed in claim 12, wherein each piston is arranged to have a relatively short stroke of 30 to 80mm.

24. (new) A pump as claimed in claim 23, wherein each piston has a diameter of between 60 and 150 mm.

25. (new) A pump characterised by comprising first and second pistons reciprocable rectilinearly through a stroke of between 30mm and 80mm in respective first and second cylinders, said first and second pistons being moved relative to their respective cylinders by operation of an A.C. electric motor the rotary output shaft of which is coupled to said first and second pistons by means including a constant velocity cam and cam follower mechanism converting rotary motion of the output shaft into reciprocatory motion of said first and second pistons 180° out of phase with one another.

26. (new) A pump as claimed in claim 25 wherein each piston has a diameter of between 60mm and 150mm.

27. (new) A liquid paint circulating pump comprising:
first and second pistons reciprocable rectilinearly through a stroke of between 30mm and 80mm in respective first and second cylinders, each piston having a diameter of between 60mm and 150mm;

an A.C. electric motor having a rotary output shaft;

a constant velocity cam coupled to said rotary output shaft; and

first and second cam followers coupled to said first and second pistons for converting rotary motion of the output shaft into reciprocatory motion of said first and second pistons within their respective cylinders.

28. (new) A liquid paint circulating pump as claimed in claim 27, wherein said first and second pistons have reciprocatory motion 180° out of phase with one another.